REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action mailed December 1, 2009. The status of the application is as follows:

- Claims 1-20 are pending, claims 1, 2, 10-12 and 14 have been amended, and claims 15-20 have been added;
- Claim 14 is rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter;
- Claims 1-9 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention;
- Claims 1, 2, 4 and 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Laidlaw et al. (US 7,355,597); and
- Claims 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laidlaw et al. in view of Pfister et al. (US 7,298,372 B2).

The rejections are discussed below.

The Rejection under 35 U.S.C. 101

Claim 14 stands rejected under 35 U.S.C. 101. In particular, the Office asserts that claim 14 recites non-statutory subject matter. Claim 14 has been amended to overcome the rejection, rendering the rejection thereof moot.

The Rejection under 35 U.S.C. 101

Claims 1-9 stand rejected under 35 U.S.C. 101. In particular, the Office asserts that claims 1-9 do not fall within one of the four statutory categories of invention. Claims 1-9 have been amended to overcome the rejection, rendering the rejection thereof moot.

The Rejection of Claims 1, 2, 4 and 10-14 under 35 U.S.C. 102(b)

Claims 1, 2, 4 and 10-14 stand rejected under 35 U.S.C. 102(b) as being anticipated by Laidlaw et al. This rejection should be withdrawn because Laidlaw et al. does not teach each and every element as set forth in the subject claims and, therefore, does not anticipate claims 1, 2, 4 and 10-14.

> A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). MPEP §2131.

Independent **claim 1** has been amended and is now directed to a method of interactively visualizing a three-dimensional data set of an object of interest including, *inter alia*, that the method allows for an interactive input, **and if there is an interactive input, an image is rendered with a varying rendering method in a pre-scan mode, and if there is no interactive input, the image is re-rendered with a constant rendering method in a full-scan mode resulting in a maximum quality of the whole image**. Laidlaw et al. does not teach or suggest at least the emphasized claim aspects.

The Office asserts that Laidlaw et al. teaches at column 16, lines 64-67, that if there is an interactive input, an image is rendered with a varying rendering method in a pre-scan mode. Applicants respectfully disagree. Laidlaw et al. teaches in this section that a primary dataset could be derived in whole or part from another type of system, such as from a CT scanner, a positron emission tomography (PET) system, a functional MRI, a multi-electrode EEG or MEG, and further at column 17, lines 1-6, a confocal microscope, a multi-photon microscope, or an optical projection tomography (OPT) system. Laidlaw et al. further teaches at column 17, lines 3-5, that combinations of data from different types of systems may thus also be employed to form a multivalued dataset, such as data obtained from the MRI and data obtained from a PET system. None of these sections of Laidlaw et al. teach or suggest that <u>if there is an interactive input, an image is rendered with a varying rendering method in a pre-scan mode</u> as required by claim 1.

The Office asserts that Laidlaw et al. teaches at column 15, lines 40-46, that if there is no interactive input, the image is re-rendered with a constant rendering method in a full-scan mode, resulting in a maximum quality of the whole image. Applicants respectfully disagree. Laidlaw et al. teaches in the above cited section that typical rendering rates have been found to be four to five frames per second. Laidlaw et al. further teaches in the above cited section that clipping planes help isolate regions of interest and increase the frame rate so that zooming in on those sections does not significantly slow the rendering rate. Laidlaw further teaches in the above cited section that a high-resolution screen-capture feature enables a user to quickly navigate to

interesting data views and capture high-resolution images of them with minimal additional waiting. As such, the above-cited section of Laidlaw et al. does not teach or suggest that if there is no interactive input, the image is re-rendered with a constant rendering method in a full-scan mode resulting in a maximum quality of the whole image as required by claim 1.

In view of the above, the rejection of claim 1 should be withdrawn.

Independent claim 10 has been amended and is now directed to a data processing device including, *inter alia*, **that if there is an interactive input, a rendering method is a pre-scan mode having a resolution less than a resolution of a full-scan mode, and if there is no interactive input, the rendering method is in the full-scan mode**. Laidlaw et al. does not teach or suggest at least the emphasized claim aspects.

The Office cites to Laidlaw et al. at column 16, lines 64-67, as teaching that if there is an interactive input, an image is rendered with a varying rendering method in a pre-scan mode. As discussed above, Laidlaw et al. teaches in this section that a primary dataset could be derived in whole or part from another type of system, such as from a CT scanner, a positron emission tomography (PET) system, a functional MRI, a multi-electrode EEG or MEG, and further at column 17, lines 1-6, a confocal microscope, a multi-photon microscope, or an optical projection tomography (OPT) system. Laidlaw et al. further teaches at column 17, lines 3-5, that combinations of data from different types of systems may thus also be employed to form a multivalued dataset, such as data obtained from the MRI and data obtained from a PET system. None of the above sections of Laidlaw et al. teach or suggest that if there is an interactive input, a rendering method is a pre-scan mode having a resolution less than a resolution of a full-scan mode as required by claim 10.

The Office cites to Laidlaw et al. at column 15, lines 40-46, as teaching that if there is no interactive input, the image is re-rendered with a constant rendering method in a full-scan mode, resulting in a maximum quality of the whole image. As discussed above, Laidlaw et al. teaches in the above cited section that typical rendering rates have been found to be four to five frames per second. Laidlaw et al. further teaches in the above cited section that clipping planes help isolate regions of interest and increase the frame rate so that zooming in on those sections does not significantly slow the rendering rate. Laidlaw further teaches in the above cited section that a high-resolution screen-capture feature enables a user to quickly navigate to interesting data

views and capture high-resolution images of them with minimal additional waiting. The above-cited sections of Laidlaw et al. do not teach or suggest that if there is no interactive input, the rendering method is in the full-scan mode as required by claim 10.

In view of the above, the rejection of claim 10 should be withdrawn.

Independent **claims 12 and 14** have been amended to recite aspects similar to those recited in connection with claim 1. As such, the above discussion regarding claim 1 applies *mutatis mutandis* to claims 12 and 14, and this rejection should be withdrawn.

Claims 4, 11 and 13 respectively depend from claims 1, 10 and 12, and are allowable at least by virtue of their dependencies.

The Rejection of Claims 3 and 5-9 under 35 U.S.C. 103(a)

Claims 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laidlaw et al. in view of Pfister et al. **Claims 3 and 5-9** depend from claim 1 and are allowable at least by virtue of their dependencies.

New Claims 15-20

Newly added claims 15-20 emphasize various aspects. No new matter has been added. The aspects in these claims are absent from the art of record. Entry and allowance of claims 15-20 is respectfully requested.

Conclusion

In view of the foregoing, it is submitted that the claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

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